

REMARKS

Claims 1, 2, 4-19, 21, and 23-39 are pending in this application. Claim 1 has been amended to better define the invention and to better illustrate the structure of the claimed roofing material.

Claim 1 now requires “the two or more sandwich structures are butt joined in the widthwise direction by being also integrally molded by a resin transfer molding”. This feature is not taught, disclosed, or suggested by Head. At column 2, lines 1-4, Head teaches “the flat plank member. . . being formed in a single pultrusion process”. Head further explains the pultrusion process in the paragraph bridging cols. 3-4, as follows:

“The flat plank member 1 is a rigid, hollow, integral, pultruded structure of glass fibre reinforced plastics material. It is formed in a single pultrusion operation. In the technique known as "pultrusion" a complete member can be pulled from an aperture of appropriate shape. By this technique, continuous glass reinforcing rovings and mat impregnated with plastics material can be pulled through a heated die system. The complete member is heated and cured as it is pulled from the die system. The rigid closed cell foam filling is preferably foamed into the member as part of the continuous process of manufacture, although it may alternatively be placed in the member at a later stage.”

In contrast, the specification of the present application describes that “the two or more sandwich structures are butt joined in the widthwise direction by being also integrally molded by a resin transfer molding” on page 31, line 11 to page 34, line 30. The Examiner is respectfully requested to review this portion of the disclosure and note that the pultrusion process of Head does not disclose the resin transfer molding process of the present application.

In a pultrusion process, reinforcing fiber structure is impregnated with plastic material and pulled through a heated die system. In the resin transfer molding process of claim 1, molded fiber structure is impregnated with a resin, to allow them to be integrally molded.

In fact, it is not possible to manufacture large-size fiber reinforced structures, as are required by claim 1, by the pultrusion process. Please note that the each sandwich structure has a length of from 10 m to 25 m and a width of from 1.5 m to 3.5 m. Clearly, one of ordinary skill in the art could not substitute the pultrusion process of Head for the resin transfer molding process of the present invention, when it would not be possible to use a pultrusion process to create

structures of the size required by claim 1. This is further illustrated in the original specification on page 35, where it is noted that the present invention permits the creation of large FRP roofing materials with excellent weathering and wear properties which are integrally molded.

Applicants also note that Rothman (used in an alternate rejection of claim 1) also fails to teach “the two or more sandwich structures are butt joined in the widthwise direction by being also integrally molded by a resin transfer molding”. As noted in col. 7, lines 18-21 and 34-38 of Rothman, “[t]he F-shaped pultrusion angle member forming the side walls of the embodiment of the present invention shown in Fig. 4 are formed by pulling the resin through an F-shaped die. . . . The reinforcing members may be made by the same process used to make the pultrusion angle members forming the side walls of the panel. Thus, it is proper to refer to reinforcing members 44 and 54 as pultrusion reinforcing members.”

For these reasons, neither Head nor Rothman teach, disclose, or suggest claim 1 of the present application in a manner that one of ordinary skill in the art would find obvious. Neither of the cited references shows the specified resin transfer molding process for making an FRP roofing material according to claim 1. The rejection of claim 1 under 35 USC 103(a) and claims depending therefrom should, therefore, be withdrawn.

All claims are now in condition for allowance and a notice thereof is earnestly solicited.

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Respectfully submitted,

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